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10/656,122	09/08/2003	Wei-Chih Chang	4006-265	8657

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EXAMINER

WANG, GEORGE Y

ART UNIT PAPER NUMBER

2871

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/656,122

**Applicant(s)**

CHANG ET AL.

**Examiner**

George Y. Wang

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 14-17 and 20-27 is/are pending in the application.
- 4a) Of the above claim(s) 20-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/30/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Newly submitted claim 20-27 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

This application contains claims directed to the following patentably distinct species:

(1) the specifics of a liquid crystal display (LCD) comprising a plurality of reflection electrodes formed in the reflection region and an orientation layer formed over the reflection electrodes and the transparent conductor layer, having two distinct orientation directions comprising a first embodiment corresponding to claims 14-17;

(2) the specifics of a liquid crystal display (LCD) comprising a liquid crystal layer, a pixel region, a continuous wave surface over the reflection and transmissive regions, a reflection electrode in a peak area of the continuous wave surface, and a transmission electrode in the valley area of the continuous wave surface comprising a second embodiment corresponding to claims 20-27.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 20-27 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 14-15 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Kubota et al. (U.S. Patent No. 6,771,334, hereafter "Kubota").

4. As to claim 14, Kubota discloses a liquid crystal display (LCD) device (fig. 3, ref. 1) that comprises a first substrate (fig. 3, ref. 2), a second substrate (fig. 3, ref. 5), a plurality of reflection regions (fig. 3, "reflective display region") formed over the first substrate, a plurality of transmission regions (fig. 3, "transmissive display region") formed over the first substrate, a transparent conductor layer (fig. 3, ref. 3b) formed on the transmission region, the reflection region including a plurality of reflection electrodes

(fig. 3, ref. 20), an orientation layer (fig. 3, ref. 7a, 7b) formed over the reflection electrodes and the transparent conductor layer, where a first rubbing force is applied to the orientation layer to form a first orientation direction and a second rubbing force is applied to change the first orientation to a second orientation direction (col. 4, lines 17-19) so that the orientation layer formed over the reflection electrodes has a first orientation direction and the orientation layer formed over the transparent conductor layer has an orientation direction such that the first orientation differs from second orientation (col. 11, lines 52-60).

5. As per claim 15, Kubota discloses the LCD as recited above where the second orientation direction defines the liquid crystal angle between about 70 degrees and 90 degrees ("88 degrees," col. 11, lines 57-59).

6. Regarding claims 17, Kubota discloses the LCD as recited above where the orientation layer formed over the first substrate has concave and convex structures (fig. 3, ref. 25).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota in view of Arai (U.S. Patent No 6,717,641).

Kubota discloses the LCD as recited above where the second orientation direction is adjusted and determined to have the liquid crystal angle at about 5 degrees (col. 11, lines 58-60), however the reference fails to specifically disclose the second orientation direction is adjusted and determined to have the liquid crystal angle between about 10 to 70 degrees.

Arai discloses an LCD device (title) where the orientation direction in the transmissive area is adjusted and determined to have the liquid crystal angle between about 10 to 70 degrees ("45 degrees," col. 6, lines 21-29).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the second orientation direction of Kubota adjusted and determined for the liquid crystal angle between about 10 to 70 degrees since one would

be motivated to provide a bright achromatic white display (col. 6, lines 53-55).

Ultimately, this generates a display to perform an achromatic metallic tone with high contrast within a bright diffused white background to improve the visual design and fashion of the LCD (col. 2, lines 54-58).

### ***Response to Arguments***

9. Applicant's arguments filed September 9, 2005 have been fully considered but they are not persuasive.

Applicant amends independent claim 14 to include the limitations previously recited in dependent 18 (now cancelled), which define the orientation layer as having "a first rubbing force...applied to said orientation layer to define a first orientation direction and a second rubbing force...applied to selected regions of said orientation layer to change said first orientation direction in said selected regions to a second orientation direction." Applicant argues that the Kubota (primary reference) is deficient in teaching "each and every element" as required for a 102(e) rejection because the Kubota reference uses a mask to perform the rubbing function whereas the claimed invention does not require such a use.

In response to Applicant's argument, it is first noted that even though the product-by-process limitation mentioned above is recognized as limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art,

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the claim is unpatentable even though the prior art product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). See also MPEP 2113.

In this case, the Kubota reference clearly teaches an orientation layer (fig. 3, ref. 7a, 7b) formed over the reflection electrodes and the transparent conductor layer so that the orientation layer formed over the reflection electrodes has a first orientation direction and the orientation layer formed over the transparent conductor layer has an orientation direction such that the first orientation differs from second orientation (col. 11, lines 52-60). Thus, the structural features of the claimed invention – namely the two different orientation directions of the orientation layer – are met by the Kubota reference.

Furthermore, “[w]here a product-by-process claim is rejected over a prior art product that appears to be identical, although produced by a different process, the burden is upon the applicants to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product.” *In re Marosi*, 710 F.2d 799, 803, 218 USPQ 289, 292-93 (Fed. Cir. 1983). In this case, Applicant has failed to provide any evidence to suggest that using a mask according to the Kubota reference (col. 4, lines 17-19) would result in a different product than that of the claimed invention, which merely discloses a “rubbing force.”

In addition, instant claim 14 is not limited to an orientation layer formed without a mask. Claim 14 uses open claim language (“comprising”) and therefore reads on orientation layer of Kubota that applies rubbing forces using a mask. As discussed above, Applicant also has not claimed or provided any evidence to indicate the distinguishing features of an orientation layer formed by rubbing without a mask.

As a result, Applicant's argument fail to place the application in condition for allowance at this time.

### ***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Y. Wang whose telephone number is 571-272-2304. The examiner can normally be reached on M-F, 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

George Y. Wang  
Examiner  
Art Unit 2871

February 16, 2006

  
ANDREW SCHECHTER  
PRIMARY EXAMINER